Amendments to the Claims:

This Listing of Claims, as below, will replace all prior versions of claims in the present application:

Listing of Claims:

What is claimed is:

1. (Currently Amended) A system for controlling packet classification behavior of a plurality of heterogeneous network processors in a network, the network also including at least one packet classification application being network processor independent and utilized in at least one host processor utilizing at least one packet classification application, the system comprising:

a plurality of definable rules for determining packet classification behavior in a predetermined priority sequence,

a plurality of generic application program interfaces (APIs) for: (i) communicating with each of (a) the at least one packet classification application in a network processor independent manner and (b) the plurality of heterogeneous network processors in a network processor specific manner, and (ii) managing the packet classification behavior of the plurality of heterogeneous network processors in the network processor specific manner by managing software or firmware associated with the plurality of heterogeneous network processors,

wherein the plurality of generic APIs are devoid of a separate set of APIs which are specific to each type of one or more of the plurality of heterogeneous network

processors, provide a null behavior as a packet classification behavior for unsupported operations, includes a define API for allowing a rule of the plurality of definable rules to be defined, and are defined using abstraction

~~the plurality of generic APIs for communicating with the at least one packet classification application in the at least one host processor in a network processor independent manner,~~

~~the plurality of generic APIs managing the packet classification behavior of the plurality of heterogeneous network processors in a network processor specific manner;~~

~~wherein the plurality of generic APIs allow the at least one packet classification application to be network processor independent and to manage the packet classification behavior of the plurality of heterogeneous network processors in the network processor specific manner, and further include a define API for allowing a rule of the plurality of definable rules to be defined.~~

2. (Currently Amended)   The system of claim 1 wherein the plurality of generic APIs further return a null behavior for a portion of the plurality of heterogeneous network processors in which a particular function of a particular API is not supported by one or more of the plurality of heterogeneous network processors.

3. (Previously Withdrawn).

4. (Previously Amended)   The system of claim 2 wherein the define API allows a

priority, a rule number, a rule type, at least one corresponding field and at least one

corresponding patterns to be defined.

5. (Previously Amended)   The system of claim 1 wherein the plurality of generic APIs

include a purge API to allow a portion of the plurality of rules for a network processor of

the plurality of heterogeneous network processors to be deleted.

6. (Previously Amended)   The system of claim 1 wherein the plurality of generic APIs

include a delete API for allowing a rule of the plurality of definable rules to be deleted.

7. (Previously Amended)   The system of claim 1 wherein the plurality of generic APIs

include a list API for allowing a portion of the plurality of rules to be listed.

8. (Previously Amended)   The system of claim 1 wherein the plurality of generic APIs

include a swap API for allowing a first priority of a first rule to be swapped with a second

priority of a second rule.

9. (Currently Amended)   A computer program product embodied on a computer-

readable medium for controlling packet classification behavior of a plurality of

heterogeneous network processors in a network, the network also including at least one

packet classification application being network processor independent and utilized in at

least one host processor ~~utilizing at least one packet classification application~~, the

program comprising instructions for:

implementing a plurality of generic application program interfaces (APIs) <u>devoid of a</u>

<u>separate set of APIs which are specific to each type of one or more of the plurality of</u>

<u>heterogeneous network processors for</u> communicating with the at least one packet

classification application and the plurality of heterogeneous network processors, the

plurality of generic APIs for communicating with the at least one packet classification

application in the at least one host processor in a network processor independent manner,

the plurality of generic APIs managing the packet classification behavior of the plurality

of heterogeneous network processors in a network processor specific manner <u>by</u>

<u>managing software or firmware associated with the plurality of heterogeneous network</u>

<u>processors</u> and <u>the plurality of generic APIs</u> further <u>providing a null behavior as a packet</u>

<u>classification behavior for unsupported operations and</u> including a define API for

allowing a rule of the plurality of definable rules to be defined <u>by abstraction</u>; wherein

the plurality of generic APIs allow the at least one packet classification application to be

network processor independent and to manage the packet classification behavior of the

plurality of heterogeneous network processors in the network processor specific manner

and wherein the program <u>product</u> uses a plurality of definable rules for determining

packet classification behavior in a predetermined priority sequence.

10. (Currently Amended)   The computer-readable program <u>product</u> of claim 9

wherein the plurality of generic APIs further return<u>s</u> a null behavior for a portion of the

plurality of heterogeneous network processors in which a particular function of a

particular API is not supported <u>by one or more of the plurality of heterogeneous network</u>

<u>processors</u>.

11. (Withdrawn)

12. (Currently Amended)   The computer-readable program <u>product</u> of claim ~~11~~ <u>10</u>

wherein the define API allows a priority, a rule number, a rule type, at least one

corresponding field and at least one corresponding patterns to be defined.

13. (Currently Amended)   The computer-readable program <u>product</u> of claim 9

wherein the plurality of generic APIs include a purge API to allow a portion of the

plurality of rules for a network processor of the plurality of heterogeneous network

processors to be deleted.

14. (Currently Amended)   The computer-readable program <u>product</u> of claim 9

wherein the plurality of generic APIs include a delete API for allowing a rule of the

plurality of rules to be deleted.

15. (Currently Amended)   The computer-readable program <u>product</u> of claim 9

wherein the plurality of generic APIs include a list API for allowing a portion of the

plurality of rules to be listed.

16. (Currently Amended) The computer-readable program product of claim 9 wherein the plurality of generic APIs include a swap API for allowing a first priority of a first rule to be swapped with a second priority of a second rule.

17. (Currently Amended) A method for controlling packet classification behavior of a plurality of heterogeneous network processors in a network using a plurality of definable rules for determining packet classification behavior in a predetermined priority sequence, the network also including at least one host processor utilizing at least one packet classification application, the method comprising:

(a) abstracting the packet classification behavior of each of the plurality of heterogeneous network processors;

(b) providing a plurality of generic application program interfaces (APIs) based on the abstraction devoid of a separate set of APIs which are specific to each type of one or more of the plurality of heterogeneous network processors, the plurality of generic APIs communicating with the at least one packet classification application and the plurality of heterogeneous network processors, the plurality of generic APIs for communicating with the at least one packet classification application in the at least one host processor in a network processor independent manner, the plurality of generic APIs managing the packet classification behavior of the plurality of heterogeneous network processors in a network processor specific manner by managing software or firmware associated with the plurality of heterogeneous network processors, and the plurality of generic APIs further providing a null behavior as a packet classification behavior for

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unsupported operations and including a define API for allowing a rule of the plurality of

definable rules to be defined by abstraction;

wherein the plurality of generic APIs allow the at least one packet classification

application to be network processor independent and to manage the packet classification

behavior of the plurality of heterogeneous network processors in the network processor

specific manner.

18. (Currently Amended)   The method of claim 17 wherein the plurality of generic

APIs further return a null behavior for a portion of the plurality of heterogeneous network

processors in which a particular function of a particular API is not supported by one or

more of the plurality of heterogeneous network processors.

19. (Previously Withdrawn).

20. (Currently Amended)   The method of claim 20 17, wherein the define API allows

a priority, a rule number, a rule type, at least one corresponding field and at least one

corresponding patterns to be defined.

21. (Previously Amended)   The method of claim 17 wherein the plurality of generic

APIs include a purge API to allow a portion of the plurality of definable rules for a

network processor of the plurality of heterogeneous network processors to be deleted.

22. (Previously Amended)   The method of claim 17 wherein the plurality of generic

APIs include a delete API for allowing a rule of the plurality of definable rules to be

deleted.

23. (Previously Amended)   The method of claim 17 wherein the plurality of generic

APIs include a list API for allowing a portion of the plurality of definable rules to be

listed.

24. (Previously Amended)   The method of claim 17 wherein the plurality of generic

APIs include a swap API for allowing a first priority of a first rule to be swapped with a

second priority of a second rule.

25. (Newly Added)   A computer data signal embodied in a carrier wave, comprising

instructions for controlling packet classification behavior of a plurality of heterogeneous

network processors in a network using a plurality of definable rules for determining

packet classification behavior in a predetermined priority sequence, the network also

including at least one host processor utilizing at least one packet classification

application, the instructions comprising:

(a)   abstracting the packet classification behavior of each of the plurality of

heterogeneous network processors;

(b)   providing a plurality of generic application program interfaces (APIs) based on

the abstraction devoid of a separate set of APIs which are specific to each type of one or

more of the plurality of heterogeneous network processors, the plurality of generic APIs

communicating with the at least one packet classification application and the plurality of heterogeneous network processors, the plurality of generic APIs for communicating with the at least one packet classification application in the at least one host processor in a network processor independent manner, the plurality of generic APIs managing the packet classification behavior of the plurality of heterogeneous network processors in a network processor specific manner by managing software or firmware associated with the plurality of heterogeneous network processors, and the plurality of generic APIs further providing a null behavior as a packet classification behavior for unsupported operations and including a define API for allowing a rule of the plurality of definable rules to be defined by abstraction; wherein the plurality of generic APIs allow the at least one packet classification application to be network processor independent and to manage the packet classification behavior of the plurality of heterogeneous network processors in the network processor specific manner.